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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/711,770      | 11/13/2000  | Mark Alexander       | 2836- P056D1        | 7762             |

7590 08/26/2004  
 James J. Murphy, Esq.  
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EXAMINER

MEI, XU

ART UNIT PAPER NUMBER

2644

DATE MAILED: 08/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/711,770

**Applicant(s)**

ALEXANDER ET AL.

**Examiner**

Xu Mei

**Art Unit**

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 19-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 19-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 19-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 19 recites the limitation "said noninverting input" in line 6. There is insufficient antecedent basis for this limitation in the claim.

Claim 19 recites the limitation "said operational amplifier" in lines 6-7 and line 16. There is insufficient antecedent basis for this limitation in the claim.

Claim 22 recites the limitation "said tap" in lines 3-4 and 7. There is insufficient antecedent basis for this limitation in the claim.

Claim 23 recites the limitation "said circuit" in lines 3-4. There is insufficient antecedent basis for this limitation in the claim.

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Claim 23 recites the limitation "said first and second sets of bits" in lines 13-14. There is insufficient antecedent basis for this limitation in the claim.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 19-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Segawa et al (US-5523721, hereafter, Segawa) in view of Williams (US-5249225).

Regarding claims 19 and 22, Segawa discloses an attenuator (see attenuator in Fig. 3) comprising a first stage including a first operational amplifier; a tapped resistor (9) having an input for receiving input data, an output coupled to an output of said first operational amplifier, and a plurality of taps (resistors 8) for selectively presenting a sequence of voltages to said noninverting input of said operational amplifier, each of said sequence of voltages corresponding to an attenuation

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step, said first stage in response to said sequence of voltages stepping an attenuation produced by said attenuator from an intermediate value to a predetermined ending value. And Segawa discloses the attenuator including a decoder for selectively coupling a tap of the non-inverting input of the amplifier of the first stage. What's not taught by Segawa is the attenuator including a second stage with essentially the same structure as the first stage as claimed.

It is old and well known in the amplifier art to utilize cascade connection for multiple amplifier stages for improving accuracy and stability of signal(s) processing. Williams discloses an attenuator including tapped resistor with two stages in cascade connection (see Fig. 7). It would have been obvious to one of ordinary skill in the art to modify the attenuator as shown by Segawa by having a second stage or additional stage as shown by Williams in order to improving accuracy and stability of signal(s) processing for the attenuator.

Regarding claim 20, the modified multi-stage attenuator of Segawa would have including separate decoders for different stage control as claimed.

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5. Claims 21 and 23 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Ehni, Spitalny et al, Sculley, and Alexander et al are made of record here as pertinent art to the claimed invention.

The cited references above disclose various attenuators including tapped resistor for signals processing.


7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Xu Mei whose telephone number is 703-308-6610. The examiner can normally be reached on Monday-Friday (9:30-6:00), alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W Isen can be reached on 703-305-4386. The fax phone number for

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the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Xu Mei  
Primary Examiner  
Art Unit 2644  
8/17/2004